APPENDIX A

U S WEST, Inc.

1801 California Street, Suite 5100
Denver, Colorado 80202
303 672-2859
Facsimile 303 295-6973
KKRAUSE@USWEST.COM

Kathryn Marie Krause
Senior Attorney

Suite 700
1020 Nineteenth Street, NW
Washington, DC 20036
202 429-3134
Facsimile 202 296-5157

Elridge A. Stafford
Executive Director-
Federal Regulatory

May 19, 2000

Ms. Magalie Roman Salas
Secretary
Federal Communications Commission
Room TW-A325
445 12th Street, S.W.
Washington, DC 20554

Re: Comments regarding the Commission's Further Notice in the Number Resource Optimization ("NRO") Proceeding, CC Docket No. 99-200

Dear Ms. Salas:

Please associate this letter with the above-referenced proceeding.

Introduction and Summary

U S WEST is filing this letter, in addition to a more formal legal pleading addressing cost recovery, so that our positions on two of the issues addressed by the Further Notice[1] do not get "lost" in the analysis of the important cost recovery issues.[2] Below we address the matter of **Number Utilization Thresholds** and what might be a desirable threshold required to be reached before a non-thousand block pooling carrier/code holder could receive additional numbers. As part of that discussion we address the differences between the utilization equation required by the Federal Communications Commission's ("FCC" or "Commission") NRO Report and Order and that previously utilized by industry, and how those differences are bound to produce confusion and tension in the determination of a mandatory, regulatory threshold. For this reason, we urge the Commission to adopt a threshold that is "flexible" and that can easily be changed as circumstances and additional experience require changes. We also address the matter of

[1] In the Matter of Numbering Resource Optimization, CC Docket No. 99-200, Report and Order and Further Notice of Proposed Rulemaking, FCC 00-104, rel. Mar. 31, 2000 ("Further Notice" or "NRO Report and Order").

[2] A copy of this letter is also included in our more formal filing as an Appendix.

allowing Commercial Mobile Radio Service ("CMRS") providers some **additional time after the deployment of Local Number Portability** ("LNP") to implement number pooling. We believe that allowing such time would be in the commercial interest of both the providers and the overall public interest.

The matters we raise herein are important not only to U S WEST as a commercial operation but as the first line of "representation" for our customers, who often do not follow the intricacies of regulatory matters. It is critical to both of these interests that sufficient numbers be available to carriers to meet the needs of customers, especially as those needs increase as new competitors and new telecommunications-based service offerings become available. For this reason, both the threshold established as necessary to secure additional numbers and the timing of CMRS pooling must be done with the goal of serving customers with the best and most accurate number optimization model possible. We are confident that such a model can be attained if the Commission and industry work together to increase common understandings and provide for practical implementations of processes that incorporate reasonable commercial practices.[3]

Number Utilization Threshold for Non-Pooling Carriers

In the Further Notice, the Commission asks about number utilization thresholds with respect to carriers not participating in thousands-block pooling[4] in order to flesh out a more meaningful record.[5] The information is sought both with respect to a national utilization level/threshold and a rate center-specific threshold.[6]

The context in which number utilization levels and thresholds are being addressed in the Further Notice involve the application of the utilization level equation established by the

---

[3] For example, the Commission's determination in its NRO Report and Order regarding the timeframe allowed with respect to Reserved Numbers does a disservice to both of these interests. In adopting a 45-day time frame regarding how long a number can be "reserved," the Commission rejected the opinion of a national numbering "subject matter expert" on numbering practices as well as sound commercial policies proposing a considerably longer period of time that corresponded more closely to industry practices and customer expectations. See NRO Report and Order ¶¶ 22-23 (rejecting the North American Numbering Council ("NANC") recommendation that numbers be permitted to remain in a reserve status/category for a 12-month period of time, with an additional six months of possible extensions). It also ignored the reality that customers often reserve numbers, have stationery printed, advertise and invest substantial sums regarding the implementation of a business enterprise that may not begin operations for some time. Indeed, U S WEST hazards a guess that the Commission could not have had the numbering scheme associated with its move to the Portals had it not reserved numbers for longer than 45 days. In the reconsideration phase, we hope to convince the Commission to change its position on the length of time that reserved numbers can be held in that category.

[4] For the most part, for U S WEST, this matter would be relevant to our wireless operations.

[5] See NRO Report and Order ¶ 115; Further Notice ¶ 248.

[6] Utilization data (rather than "thresholds") are also relevant to pooling carriers, since such carriers must report information regarding those levels to the North American Numbering Plan Administration. See 47 C.F.R. § 52.15(f)(5)(i).

Commission in the NRO Report and Order.[7] As the Commission itself acknowledges, carriers (at least non-pooling carriers) have not utilized that particular formula in the past to determine their utilization levels.[8] The specifics of the equation and the effect of the percentage result represent a radical departure from the way utilization information has been used previously.

In the past, utilization rates or levels have been used by carriers to understand their own internal number management and to report utilization information to various regulatory authorities, as appropriate.[9] Those rates were significant from a commercial perspective, not a mandatory, regulatory one. While there may have been different variations on the methodology or equation used by carriers to determine their utilization levels (for example, wireline carriers might use a different methodology than wireless carriers), generally the equation was one accepted by those in the industry utilizing it.[10]

The Commission's NRO Report and Order changes both the "form" of number utilization equations and the context of utilization rates and levels materially. All numbers must now be assigned to a particular category and then be folded into the Commission's newly-devised equation. Then, from that equation, at least with respect to non-pooling carriers, the Commission erects a type of "gatekeeper" function to the derived result. That is, unless and until a carrier reaches a particular threshold percentage, it would be unable to secure additional numbering resources. Thus, the bar has been raised regarding the significance of utilization equations, levels and rates. All elements become more critical to carriers and the industry.

The equation calculation found in the Commission's NRO Report and Order[11] is infirm in a number of respects (all of which will be more fully articulated in anticipated petitions for reconsideration). First, the numerator and denominator are not properly determined. Second, within the numerator and denominator the actual categories of numbers remain open to challenge and reconsideration. Third, the equation overall tends to **decrease significantly** carriers' current utilization levels or rates. While the ultimate mathematical outcome may not be nearly so

---

[7] NRO Report and Order ¶¶ 107-112.

[8] See id. ¶ 115.

[9] See, e.g., ex parte letter from Kathryn Marie Krause, U S WEST, filed herein on Mar. 7, 2000.

[10] In general, the equation categorized numbers as "assigned" or "not assigned." In the latter category, a carrier might include those which the Commission calls "intermediate," "aging," "administrative" or "reserved." However, the precise total of numbers included in each category (so as to add each category to each other) might not have been tracked with any precision.

[11] The Commission's proposed equation is Assigned (as these terms are now defined by the Commission), divided by [**maybe**] intermediate + aging + administrative + reserved + available. There is an inconsistency between the discussion of the formula in the NRO Report and Order (paragraph 109) and the language used in the Rule (47 C.F.R. § 52.15(g)(3)(ii)). The latter states that it is the "total numbering resources in the applicant's inventory" of numbers held by a carrier that should make up the denominator (which would exclude "intermediate" numbers per the statements found in paragraph 21 of the NRO Report and Order), whereas the former uses the phrase "total numbering resources assigned to that carrier in the appropriate geographic region" which might allow "intermediate" numbers to be included as part of the "total numbering resources."

important as where the "threshold" percentage is set, low utilization percentages tend to paint the industry as currently inefficient with respect to their management of numbering resources -- an implication entirely undeserved.[12]

Ultimately, however, the "equation" used, whatever it may be, is not as critical as the utilization percentage chosen as a "threshold." That threshold must be set at a percentage that carriers can meet fairly flexibly so that additional numbers needed for growth can be obtained. So, what would be an appropriate "specific utilization threshold" for non-pooling carriers to "meet in order to request growth numbering resources?"[13] That answer will ultimately depend on what the Commission does with its currently-required equation.

At this time, U S WEST is not in a position to comment on what might be an appropriate national utilization threshold. Thus, it is uncertain whether or not the Commission's proposal of a 50% threshold that increases by 10% annually until it reaches 80% is reasonable. We will review the comments of other parties and may address this matter on reply.

With respect to specific rate center-based utilization thresholds, we do have a recommendation. Based on the best attempts of industry representatives to work through the Commission's currently-proposed calculation equation for utilization levels, and on the assumption that the threshold should be based on a carrier having an adequate six-month supply of numbers,[14] U S WEST believes that a non-pooling carrier should be permitted to request additional growth codes when it can demonstrate a number utilization threshold of 50%, with the percentage increasing 5% per year for two years (reaching a 60% utilization level). After that, many current non-pooling carriers will have become LNP-capable and will enter into the thousand-block pooling regime (e.g., CMRS providers). Thus, additional percentage increments are not necessary for this substantial category of service providers. For those remaining carriers that would not be participating in number pooling, the Commission need not continue to ratchet up the threshold by 5% increments every year. Rather, for administrative efficiency purposes, it should simply hold that the remaining carriers not participating in number pooling but demonstrating a 60% or better utilization level can secure additional numbers.

---

[12] The decreases themselves, i.e., the "revised" utilization levels, might be used by some to argue that carriers are not utilizing numbers efficiently and so they should not be able to get additional numbers easily. For example, if based on the industry model, a carrier's utilization level is 70% and based on the FCC's prescribed equation (which, by reducing the items included in the numerator, reduces the percentage utilization) is 45%, some constituencies are certain to claim the lower number shows lack of efficient utilization, when -- in fact -- it merely shows a change in mathematic methodology.

[13] NRO Report and Order ¶ 248.

[14] Compare id. and ¶ 189 (noting that a six-month supply of numbers was appropriate for pooling carriers).

As is obvious, the percentages discussed above are less than those advocated by industry representatives in the past.[15] This is a result of the inherent tendency of the Commission's proposed equation to depress the percentages. And, while we do not agree with the Commission's utilization equation, and have a sense of discomfort from a policy perspective asking for growth numbers when our utilization might be reported as a low percentage (i.e., 50%), so long as U S WEST can secure additional numbers as needed to serve our customers and meet their needs, the exact method of calculating utilization percentages is less material.

However, we urge the Commission to maintain flexibility with respect to its chosen utilization threshold (e.g., establishing a "tentatively appropriate" level with a true-up to be determined at a future point in time), given that the "prescription" is new, the equation different from that utilized in the past, and some time is necessary to actually experience what is a "satisfactory threshold." Moreover, we believe it imperative that the Commission build-in some mechanism by which carriers' legitimate business needs for additional numbers may be addressed on an expedited bases, even if a specific rate center-threshold is not met. Such might be required, for example, to accommodate seasonal variations and new marketing initiatives. We believe such a flexible approach incorporates the kind of discipline the Commission hopes to insinuate into the process while still accommodating the public interest through flexible deployment.

Additional Time for Number Pooling Capability After LNP is Achieved by CMRS Providers

The Commission was correct when it allowed CMRS providers additional time to deploy LNP. Good cause for the LNP extension was found to exist because many CMRS providers were still in the process of securing spectrum and licenses, and where those assets were already secured were focused on deploying the build-out of their systems. It would make no sense to "undedicate" the resources the Commission found to be appropriately dedicated to system build-out and to LNP deployment and "dedicate" them to number pooling implementation. LNP-dedicated resources should not be diverted to flash-cut number pooling implementation.

CMRS providers should be permitted to continue to focus those resources on the projects at hand. A reasonable time for participation in number pooling after the completion of LNP deployment would be one year. At that point, a phased-in approach should be instituted, similar to that required under the NRO Report and Order for current LNP-capable carriers, whereby CMRS providers would pool numbers at the rate of three NPAs per NPAC region per quarter.[16]

That amount of time would allow CMRS providers to establish the systems architecture necessary for pooling, would allow for testing and the accomplishment of any necessary changes, and would allow for internal employee training and education. Not only would the

[15] See id. ¶ 248 (noting Cellular Telecommunications Industry Association's recommendation of a 60% utilization threshold as appropriate where there are jeopardy Numbering Plan Areas, which would increase annually by 5% to a maximum of 70%); see also id. ¶ 114.

[16] Compare id. ¶ 159.

public interest not be harmed by such a modest time allotment, it would be better served by the focused dedication of carrier employees on pooling initiatives than by depleting the availability of those resources currently dedicated to other commercial and regulatory requirements.

Sincerely,

Kathryn Marie Krause (RM)

Elridge A. Stafford (EAS)

CERTIFICATE OF SERVICE

I, Rebecca Ward, do hereby certify that on this 19th day of May, 2000, I have caused a copy of the foregoing **LETTER** to be served, via hand delivery, upon the persons listed on the attached service list.

Rebecca Ward

Rebecca Ward

William E. Kennard
Federal Communications Commission
8th Floor
Portals II
445 12th Street, S.W.
Washington, DC 20554

Gloria Tristani
Federal Communications Commission
8th Floor
Portals II
445 12th Street, S.W.
Washington, DC 20554

Michael K. Powell
Federal Communications Commission
8th Floor
Portals II
445 12th Street, S.W.
Washington, DC 20554

Harold Furchtgott-Roth
Federal Communications Commission
8th Floor
Portals II
445 12th Street, S.W.
Washington, DC 20554

Susan P. Ness
Federal Communications Commission
8th Floor
Portals II
445 12th Street, S.W.
Washington, DC 20554

Lawrence E. Strickling
Federal Communications Commission
Room 5C-345
Portals II
445 12th Street, S.W.
Washington, DC 20554

L. Charles Keller
Federal Communications Commission
Room 6A-324
Portals II
445 12th Street, S.W.
Washington, DC 20554

Jeannie Grimes
Federal Communications Commission
Room 6A-207
Portals II
445 12th Street, S.W.
Washington, DC 20554

(including 3x5 inch diskette w/cover letter)

Thomas J. Sugrue
Federal Communications Commission
Room 3C-207
Portals II
445 12th Street, S.W.
Washington, DC 20554

Peter Wolfe
Federal Communications Commission
Room 3A-101
Portals II
445 12th Street, S.W.
Washington, DC 20554

Tejal Mehta
Federal Communications Commission
Room 6A-431
Portals II
445 12th Street, S.W.
Washington, DC 20554

Cheryl Callahan
Federal Communications Commission
Room 6A-207
Portals II
445 12th Street, S.W.
Washington, DC 20554

Aaron Goldberger
Federal Communications Commission
Room 6A-207
Portals II
445 12th Street, S.W.
Washington, DC 20554

International Transcription
Services, Inc.
1231 20th Street, N.W.
Washington, DC 20036

CC99-200B.doc
Last update: 5/19/00

WORKPAPER 1

Workpaper 1

Total Costs - Number Pooling

TOTAL COST ANALYSIS

	Source	Total Cost	Type 2	Type 3
Network Costs	Workpaper 2	$207,613,233	$183,638,333	$23,974,900
OSS Costs	Workpaper 3	$129,824,656	$125,524,656	$4,300,000
Service Delivery Costs	Workpaper 4	$37,908,554	$37,908,554	$0
Deferrals of Splits		($3,239,692)	($3,239,692)	$0
SSP Acceleration Cost		$1,380,594	$1,380,594	$0
Total:		$373,487,344	$345,212,444	$28,274,900
% of Deployment Costs			92%	8%

DETAILED TYPE 2 COSTS FOR RECOVERY

	2000	2001	2002	2003	2004	2005	TOTAL
CAPITAL							
Network Costs	$24,650,231	$37,734,896	$19,613,481	$16,924,011	$12,479,550	$1,940,300	$113,342,469
OSS Costs	$1,500,000	$11,000,000	$0	$0	$0	$0	$12,500,000
Service Delivery Costs	$2,331,000	$970,000					$3,301,000
Total Capital	$28,481,231	$49,704,896	$19,613,481	$16,924,011	$12,479,550	$1,940,300	$129,143,469
EXPENSE							
Network Costs	$10,617,203	$19,729,949	$11,604,552	$9,090,616	$9,429,460	$9,824,084	$70,295,864
OSS Costs	$14,440,162	$60,372,427	$14,931,257	$7,770,810	$7,755,000	$7,755,000	$113,024,656
Service Delivery Costs	$6,067,252	$17,419,002	$2,947,875	$2,649,770	$2,717,747	$2,805,908	$34,607,554
Total Expense	$31,124,617	$97,521,378	$29,483,684	$19,511,196	$19,902,207	$20,384,992	$217,928,074
TOTAL DIRECT COSTS:	$59,605,848	$147,226,274	$49,097,165	$36,435,207	$32,381,757	$22,325,292	$347,071,543
SSP ACCELERATION	$1,380,594						$1,380,594
DEFERRALS OF SPLITS	($708,944)	($2,180,824)	($3,517,676)	($1,238,119)	$715,502	$3,690,370	($3,239,692)
TOTAL TYPE 2 COSTS FOR RECOVERY	$60,277,497	$145,045,450	$45,579,489	$35,197,088	$33,097,259	$26,015,661	$345,212,444

WORKPAPER 2

REDACTED -- FOR PUBLIC INSPECTION

Type 2 Network Recoverable Costs

Switching SSP including all End Office and Tandem switching sites

ref #	Account	2000	2001	2002	2003	2004	2005	TOTAL
1AESS								
Total	1AESS							
4ESS								
Total	4ESS							
5ESS								
1	2681							
2	2681							
3	2212							
Total	5ESS							
DMS100								
9	2681							
10	2681							
11	2681							
12	2681							
13	2212							
Total	DMS100							
DMS10								
14	2212							
52	2212							
15	2681							
16	2212							
Total	DMS10							

Type 2 Network Recoverable Costs

Switching SSP including all End Office and Tandem switching sites

ref #	Account	2000	2001	2002	2003	2004	2005	TOTAL
AXE10								
17	2212							
18	2212							
19	2681							
20	2681							
21	2212							
Total AXE10								
Miscellaneous Switching all switch types								
53	2212							
54	2232							
59	2212							
Total Misc Switch								
Total Switching								$100,098,798
Links STP to SCP								
22	2232							
23	6232							
24	6728							
Total Links								$308,100
SCP								
25	2212							
26	2681							
27	6212							
48	2212							
49	2681							

50	2681							
51	2681							
60	6212							
Total SCP								$15,397,171
				Type 2 Network Recoverable Costs				
ref #	**Account**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**TOTAL**
Miscellaneous Incremental Overhead Costs								
28	6535	$368,335	$538,000	$278,523	-	-	-	$1,184,857
29	6535	$219,446	$384,370	$398,918	$412,881	$427,331	$442,288	$2,285,235
30	6534	$470,270	$865,350	$896,656	$928,039	$960,520	$994,138	$5,114,973
31	6534	$140,007	$248,000	$128,553	-	-	-	$516,560
32	6534	$176,635	$384,750	$397,715	$119,748	$123,939	$128,277	$1,331,064
33	6534	$2,517,326	$2,230,500	-	-	-	-	$4,747,826
34	6534	$1,270,862	$2,170,500	$2,087,356	$2,160,458	$2,236,074	$2,314,337	$12,239,588
35	6534	$604,550	-	-	-	-	-	$604,550
36	6534	$606,681	$2,766,400	$2,591,463	$2,682,164	$2,776,041	$2,873,202	$14,295,951
37	6728	$105,600	$35,000	-	-	-	-	$140,600
38	2123	-	-	-	-	-	-	-
39	2122	$675,000	-	-	-	-	-	$675,000
40	6124	$439,171	$281,900	$153,800	$149,400	$149,400	$149,400	$1,323,071
41	2124	$9,000	-	-	-	-	-	$9,000
42	6535	$225,000	$225,000	$100,000	-	-	-	$550,000
43	6535	$200,000	$200,000	-	-	-	-	$400,000
44	6534	$2,124,720	$6,374,160	$2,124,720	$106,236	-	-	$10,729,836
45	6534	$345,000	$345,000	$172,500	-	-	-	$862,500
46	6122	-	$1,211,619	$1,499,647	$1,751,491	$1,970,355	$2,130,843	$8,563,954
47	6535	$700,000	$700,000	-	-	-	-	$1,400,000
55	6534	$33,300	$83,000	$85,700	$88,700	$91,800	$95,000	$477,500
56	6534	$21,700	$67,000	$69,600	$72,100	$74,600	$77,200	$382,200

Total Headcount		$11,252,603	$19,110,549	$10,985,152	$8,471,216	$8,810,060	$9,204,684	$67,834,264
Sub Totals								
	Type 2	$35,267,434	$57,464,845	$31,218,033	$26,014,627	$21,909,010	$11,764,384	$183,638,333
Type 3 Network Costs attributable to Number Pooling (non-recoverable)								
ref #	**Account**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**TOTAL**
1AESS								
Total	1AESS							
4ESS								
Total	4ESS							
5ESS								
Total	5ESS							
DMS100								
4	2212							
5	2212							
6	2212							
57	2212							
7	2212							
8	2212							
58	2212							
Total	DMS100							
DMS10								
Total	DMS10							
AXE10								
Total	AXE10							

Sub Totals								
	Type 3							$23,974,900
								$207,613,233

5-10-00

Number Pooling, Costs Descriptions for Projected Costs to be Incurred by Network (Operations and Technologies) (O&T)

General

Costs defined below contain estimated costs for 2000 through 2005 for the deployment of Number Pooling. Based on the timing, only a very small portion of costs have actually been incurred, as of this writing. Further, since the FCC has left open to extreme uncertainty both the implementation schedules and the scope of implementation, costs and timing are based on projections concerning what the States may do with the waiver process.

Through the LNP BFR process U S WEST has plans to equip 100% of its network to LNP by the end of 2000. U S WEST expects to be required to implement Number Pooling through the Trial Waiver process in a number of locations, many outside of the LNP defined MSAs, before the National Implementation of Number Pooling.

Specifically addressed are the cost requirements generated by the FCC to create a pool of numbers at the rate center level and the requirement observed to date in the various State filings for Number Pooling Trial Waivers in U S WEST's 14-State territory to implement number Pooling at the entire NPA level, not just the FCC's LNP implementation defined MSAs.

There is no determinable impact to the sale of queries with number pooling implementation. This negligible impact is true for both the direct queries and the default queries. No attempt is made to differentiate the cost of number pooling implementation between query and non-query related costs.

Ref Descriptive Title **Type Designation**

Description and Use with Number Pooling

The reference number corresponds to the data entries for the network portion of cost analysis for cost recovery. The descriptions provided below are more comprehensive than the information provided on that analysis work sheet.

FCC Docket 95-116; DA 98-2534 Paragraph 50 part (g) including part (h) and part (i)

All switches listed are equipped with LNP, are SSPs and perform End Office or End Office and Local Tandem or End Office and Access Tandem functions. Because of this variation in usage, no attempt is made to segregate the SSPs between End Office application and Tandem application. Number Pooling is only applicable in the End Office function.

1AESS family of switches and associated remote switches (information only)

This switch is an analog type electronic switch. This information is included for reference only. The 1AESS switches are expected to be removed from the U S WEST network by mid 2001. The 1AESS switch is not compatible with a number pooling environment. If U S WEST must build numbers into a 1AESS switch an NXX must be assigned to it. As of the time of this writing it is not anticipated that there will be a conflict in number pooling implementation schedule requirements, in either a trial format or at a National implementation level, and the need for new numbers to be assigned to the 1AESS switch. Should such a conflict arise between number pooling and numbering requirements either held orders will be created or a waiver must be approved by the appropriate commission excluding the specific switch from number pooling and allowing it to receive an entire NXX.

4ESS (information only)

U S WEST owns a single 4ESS switch that serves as an Access Tandem in Seattle, WA. This is a tandem only switch and is not included in number pooling.

5ESS Family of switches and associated remote switches

This switch is a digital type electronic switch. The generic operating system and associated hardware for that generic required to support number pooling features will be available on the switch prior the need to activate and use the number pooling features.

1 **5ESS Number Pooling Feature** 2

Lucent Technologies Inc., developed a feature functionality available on operating system generic release 5E14 known as Number Pooling Using Number Portability, 99-5E-7210, SFID 530 in accordance with ANSI Standards Committee T1S1.6 Technical Requirements Document TRQ 4, "Thousands Block Number Pooling Using Number Portability." This technical requirement specifically addresses the needs of the switching network to correctly route the call when 1) numbers are pooled into a switch but not assigned or 2) when numbers are pooled into a switch and a number of that pooled number set is ported to a different switch.

Condition 1 will be common as pooled blocks are initially assigned and should result in returning an unassigned number announcement to the calling party.

Condition 2 will occur when the originating network routes the call based on information received from the LNP query response that contains invalid routing information. Without this feature in place the switching network from both carriers will assume that all information and routing is correct and return an unassigned number announcement. With this feature in place the terminating carrier is responsible for inaccuracies in information for the originating carrier and will indicate to the originating carrier to release the call with a "Release With Cause – Code 26" error condition. This release can be used by the originating carrier to diagnose trouble conditions and to inform the calling party that a trouble conditions exists prohibiting the call from being completed.

Implementation of this feature causes concurrent work for operational support systems.

2 **5ESS Number group growth** **2**

This feature for the 5ESS is required to expand the number group capacity on certain of the 5ESS switches beyond the current limitation of 250 NXXs. This feature will also allow the 5ESS to operate with the same NXX associated with more than one NPA. This feature is designated as "Number Portability - NPA/NXX GROWTH TO 8000" and is designated as SFID 198. This feature is required in a number pooling environment when the total unique pooled in, ported in and native NPA-NXXs to that switch exceed or is expected to exceed the NXX limit of the switch, which is 250 assignable NXXs or when a single NXX will be populated on that switch in more than 1 NPA.

3 **5ESS Announcement Hardware for CC26 Treatment** **2**

This announcement is required in addition to the feature in item 1 to notify the U S WEST originating customer that the call cannot be routed as dialed due to a routing error. The announcement will instruct the caller to contact the repair center so that call routing can be repaired. Without this announcement in place the originating caller is routed to reorder tone, also known as Fast Busy Tone, which indicates a network congestion or a failure to route the call as required. Most callers assume this is a simple Busy Tone and will repeatedly attempt to complete the call prior to initiating a repair complaint.

DMS100 Family of Switches and Associated Remote Switches

This switch is a digital type electronic switch. The generic operating system and associated hardware for that generic required to support number pooling features may not be available on the switch prior the need to activate and use the number pooling features. All of these switches are equipped for SS7 and are SSP type offices. The total load placed on the processor of this switch type requires a processor replacement due to increased processor usage consumption caused by the Generic designated NA013.

4 **DMS100 NA012 Generic related hardware** 3

This entry represents the material that is required to be placed, including memory or improved processors, to enable the generic operating system NA012 to function, including the available optional features that this generic enables. This is the cost incurred to advance this previously scheduled software load to the point in time required to support the required features for Number Pooling.

5 **DMS100 Generic hardware NA013** 3

This entry represents the material that is required to be placed, including memory or improved processors, to enable the generic operating system NA013 to function, including the available optional features that this generic enables. This is the cost incurred to purchase and place this item in advance of the previously scheduled purchase to the point in time required to support the required features for Number Pooling.

6 **DMS100 Generic hardware NA012 PRI Processor Upgrades** 3

This entry represents the cost of upgrading the PRI processor cards in the impacted DMS100 switches requiring schedule advances. Without this upgrade when Generic Software Release NA012 is loaded any PRI circuits on that switch will fail. This is the cost incurred to purchase and place this item in advance of the previously scheduled purchase to the point in time required to support the required features for Number Pooling.

57 **DMS100 Generic NA011 Software** 3

This is the operating system designation by Nortel for the version of operating software required in the DMS100 switch place subsequent required generic software versions which are required to enable Number Pooling. This is the cost incurred to purchase and place this item in advance of the previously scheduled purchase to the point in time required to support the required features for Number Pooling. This issue of the generic release software must be placed to enable Generic NA012 in item 7 below.

7 **DMS100 Generic NA012 Software** 3

This is the operating system designation by Nortel for the version of operating software required in the DMS100 switch to enable portions of the Number Pooling feature set to function. This is the cost incurred to purchase and place this item in advance of the previously scheduled purchase to the point in time required to support the required features for Number Pooling. This issue of the generic release software must be placed to enable the required features in items 10 and 11 below.

8 DMS100 Generic NA013 Software **3**

This is the operating system designation by Nortel for the version of operating software required in the DMS100 switch to enable portions the Number Pooling feature set to function. This is the cost incurred to purchase and place this item in advance of the previously scheduled purchase to the point in time required to support the required features for Number Pooling. This issue of the generic release software must be placed to enable the required feature in item 9 below.

58 DMS100 SLM III Processors **3**

This hardware memory addition known as System Load Module (SLM) is required with software generic release NA013 to provide adequate memory capacity for this generic software load. This is required when item 8 above is placed.

9 DMS100 NPE0005 Thousands block number pooling & grouping **2**

This feature designated Thousands Block Number Pooling NPE0005 by Nortel is required to provide solutions for 2 major problems introduced with Number Pooling.

The first problem is that numbers that are native to the switch, ported into the switch and pooled into the switch cannot be combined into the same grouping arrangement. A grouping arrangement for example is a multiple line hunt group, a Centrex Pickup Group or an ISDN private group. Without this feature in place numbers from more than 1 type (native, ported or pooled) cannot be assigned to the same group.

The second problem is to conform with the requirements of ANSI Standards Committee T1S1.6 Technical Requirements Document TRQ 4, "Thousands Block Number Pooling Using Number Portability." This technical requirement specifically addresses the needs of the switching network to correctly route the call when 1) numbers are pooled into a switch but not assigned or 2) when numbers are pooled into a switch and a number of that pooled number set is ported to a different switch.

Condition 1 will be common as pooled blocks are initially assigned and should result in returning an unassigned number announcement to the calling party.

Condition 2 will occur when the originating network routes the call based on information received from the LNP query response that contains invalid routing information. Without this feature in place the switching network from both carriers will assume that all information and routing is correct and return an unassigned number announcement. With this feature in place the terminating carrier is responsible for inaccuracies in information for the originating carrier and will indicate to the originating carrier to release the call with a "Release With Cause – Code 26" error condition. This release can be used by the originating carrier to diagnose trouble conditions and to inform the calling party that a trouble conditions exists prohibiting the call from being completed.

Implementation of this feature for release with cause creates concurrent work for operational support systems.

This feature is first available with software release NA013.

10 **DMS100 NPE0004 Multiple NPA support Pooling** 2

This feature designated Multiple NPA Support NPE0004 is required in a pooling and number optimization environment to enable grouping arrangements to function when the numbers assigned to the group are from more than 1 NPA. A grouping arrangement for example is a multiple line hunt group, a Centrex Pickup Group or an ISDN private group. Without this feature in place numbers from more than 1 NPA cannot be assigned to the same group. This feature is first available with software release NA012.

11 **DMS100 BAS078 Duplicate NXX support with remotes** 2

This feature designated Duplicate NXX Support with Remote Switches is required in a pooling environment to enable the host and its set of remote switches to share the same NPA-NXX in multiple locations. This feature functionality is required when there is more than 1 remote switching system in a rate center served by a common host switch, and the same pooled NPA-NXX is expected to be assigned is expected to be created to provide service on more than 1 of those remote switches. This feature is first available for use with software release NA012.

12 **DMS100 NXX EXPANSION SUPPORT NPE00001, NPE00002** 2

Features required to expand number group capacity in the DMS100 beyond 800 NXXs and to allow the DMS100 to operate with the same NXX associated with more than one NPA. This feature will also allow the DMS100 to operate with the same NXX associated with more than one NPA. This feature is designated as NXX EXPANSION SUPPORT NPE00001, NPE00002. These features are required in a number pooling environment when the total unique pooled in, ported in and native NPA-NXXs to that switch and its remote switches exceed or is expected to exceed the NXX limit of the switch, which is 800 assignable NXXs, or when a single NXX will be populated on that switch in more than 1 NPA.

13 **DMS100 Announcement Hardware for CC26 Treatment** 2

This announcement is required in addition to the feature in item 11 to notify the U S WEST originating customer that the call cannot be routed as dialed due to a routing error. The announcement will instruct the caller to contact the repair center so that call routing can be repaired. Without this announcement in place the originating caller is routed to reorder tone, also known as Fast Busy Tone, which indicates a network congestion or a failure to route the call as required.

Most callers assume this is a simple Busy Tone and will repeatedly attempt to complete the call prior to initiating a repair complaint.

DMS10 Family of Switches and Associated Remote Switches

This switch is a digital type electronic switch. The generic operating system required to support number pooling features will not be provisioned on the switch prior to the date that it is anticipated that Number Pooling will be required by either the State or the FCC. This switch type will be capable of correctly functioning in a Number Pooling environment with the placement of the correct Generics and Features.

14 **DMS10 Generic 412.20 Software Host and Stand Alone Switches** 2

This is the operating system designation by Nortel for the version of the operating software required by the DMS10 switch to enable the Number Pooling feature set to function. This is the cost incurred to purchase and place this item in advance of the previously scheduled purchase to the point in time required to support the required features for Number Pooling. There were no plans prior to Number Pooling to place this release of the generic operating program.

52 **DMS10 Memory Cards for Generic 412.20** 2

This hardware memory addition is required with software generic release 412.20 to provide adequate memory capacity for this generic software load. This is required when item 14 above is placed.

15 **DMS10 Number Pooling Software package ID POOL** 2

This feature designated Thousands Block Number Pooling POOL by Nortel is required to provide solutions for 2 major problems introduced with Number Pooling.

The first problem is that numbers that are native to the switch, ported into the switch and pooled into the switch cannot be combined into the same grouping arrangement. A grouping arrangement for example is a multiple line hunt group, a Centrex Pickup Group or an ISDN private group. Without this feature in place numbers from more than 1 type (native, ported or pooled) cannot be assigned to the same group.

The second problem is to conform with the requirements of ANSI Standards Committee T1S1.6 Technical Requirements Document TRQ 4, "Thousands Block Number Pooling Using Number Portability." This technical requirement specifically addresses the needs of the switching network to correctly route the call when 1) numbers are pooled into a switch but not assigned or 2) when numbers are pooled into a switch and a number of that pooled number set is ported to a different switch.

Condition 1 will be common as pooled blocks are initially assigned and should result in returning an unassigned number announcement to the calling party.

Condition 2 will occur when the originating network routes the call based on information received from the LNP query response that contains invalid routing information. Without this feature in place the switching network from both carriers will assume that all information and routing is correct and return an unassigned number announcement. With this feature in place the terminating carrier is responsible for inaccuracies in information for the originating carrier and will indicate to the originating carrier to release the call with a "Release With Cause – Code 26" error condition. This release can be used by the originating carrier to diagnose trouble conditions and to inform the calling party that a trouble conditions exists prohibiting the call from being completed.

Implementation in this feature for release with cause creates concurrent work for operational support systems.

This feature is first available with software release 412.20.

16 **DMS10 Announcement Hardware for CC26 Treatment** 2

This announcement is required in addition to the feature in item 15 to notify the U S WEST originating customer that the call cannot be routed as dialed due to a routing error. The announcement will instruct the caller to contact the repair center so that call routing can be repaired. Without this announcement in place the originating caller is routed to reorder tone, also known as Fast Busy Tone, which indicates a network congestion or a failure to route the call as required. Most callers assume this is a simple Busy Tone and will repeatedly attempt to complete the call prior to initiating a repair complaint.

AXE10 Family of Switches and Associated Remote Switches

This switch is a digital type electronic switch. The generic operating system required to support number pooling features will not be provisioned on the switch prior to the date that it is anticipated that Number Pooling will be required by either the State or the FCC. This switch type will be capable of correctly functioning in a Number Pooling environment with the placement of the correct Generics and Features.

17 **AXE10 Generic L10R9.0** 2

These are the designations by Ericsson for the operating system software required on the AXE10 switch to enable Number Pooling to function. This is the cost incurred to purchase and place this item in advance of the previously scheduled purchase to the point in time required to support the required features for Number Pooling. There were no plans prior to Number Pooling to place either release of these generic operating programs. Generic release L10R9.0 is required to enable the feature in item 19 below. Generic release L10R10.0 is required to enable the feature in item 20 below.

18 AXE10 Generic L10R10.0 **2**

These are the designations by Ericsson for the operating system software required on the AXE10 switch to enable Number Pooling to function. This is the cost incurred to purchase and place this item in advance of the previously scheduled purchase to the point in time required to support the required features for Number Pooling. There were no plans prior to Number Pooling to place either release of these generic operating programs. Generic release L10R9.0 is required to enable the feature in item 19 below. Generic release L10R10.0 is required to enable the feature in item 20 below.

19 AXE Number Pooling Number Mix & Match and CC26 **2**

This feature functionality is not separately identified on this switch type. This feature designated Thousands Block Number Pooling by Ericsson is required to provide solutions for 2 major problems introduced with Number Pooling.

The first problem is that numbers that are native to the switch, ported into the switch and pooled into the switch cannot be combined into the same grouping arrangement. A grouping arrangement for example is a multiple line hunt group, a Centrex Pickup Group or an ISDN private group. Without this feature in place numbers from more than 1 type (native, ported or pooled) cannot be assigned to the same group.

The second problem is to conform with the requirements of ANSI Standards Committee T1S1.6 Technical Requirements Document TRQ 4, "Thousands Block Number Pooling Using Number Portability." This technical requirement specifically addresses the needs of the switching network to correctly route the call when 1) numbers are pooled into a switch but not assigned or 2) when numbers are pooled into a switch and a number of that pooled number set is ported to a different switch.

Condition 1 will be common as pooled blocks are initially assigned and should result in returning an unassigned number announcement to the calling party.

Condition 2 will occur when the originating network routes the call based on information received from the LNP query response that contains invalid routing information. Without this feature in place the switching network from both carriers will assume that all information and routing is correct and return an unassigned number announcement. With this feature in place the terminating carrier is responsible for inaccuracies in information for the originating carrier and will indicate to the originating carrier to release the call with a "Release With Cause – Code 26" error condition. This release can be used by the originating carrier to diagnose trouble conditions and to inform the calling party that a trouble conditions exists prohibiting the call from being completed.

Implementation in this feature for release with cause creates concurrent work for operational support systems.

This feature is first available with software release L10R9.0.

20 AXE Unique LRNs per RC **2**

This feature functionality is not separately identified on this switch type. This feature is first available with software release L10R10.0. This feature designated "Unique LRNs per Rate Center" by Ericsson is required to provide the capability of establishing multiple LRNs to a single switch. Specifically when the switch supports more than 1 Rate Center this feature will allow the creation and assignment of an LRN number on the switch for each Rate Center. U S WEST's current typical routing is to separate on different trunk groups local from toll traffic. This feature will be required at the time number pooling is implemented at the NPA level by the State. This feature provides for the continued correct routing and billing of the call and becomes essential in a Number Pooling environment. Without this feature in place the originating caller can be billed for completing a non-charge local call.

21 AXE10 Announcement Hardware for CC26 Treatment **2**

This announcement is required in addition to the feature in item 19 to notify the U S WEST originating customer that the call cannot be routed as dialed due to a routing error. The announcement will instruct the caller to contact the repair center so that call routing can be repaired. Without this announcement in place the originating caller is routed to reorder tone, also known as Fast Busy Tone, which indicates a network congestion or a failure to route the call as required. Most callers assume this is a simple Busy Tone and will repeatedly attempt to complete the call prior to initiating a repair complaint.

Miscellaneous Switching

These component pieces are required to provide for growth in the switching network for the added calling that will be generated by Voice Messaging providers in a Number Pooling Environment.

53 Miscellaneous Switching Inter Office Trunking Switch **2**

U S WEST provides interoffice transport for many voice messaging providers. A feature many offer to their customer base is to be able to send messages directly from the voice response unit (VRU) to another messaging subscriber. Most of these messaging systems require the NPA-NXX for the customer to be located on a single VRU. The VRU is typically connected to 1 or only a few switches which directly serves their subscriber. When a messaging provider operates more than a single VRU in the community and after number pooling is implemented, the addressing scheme will quickly become ambiguous since the NPA-NXX will begin to appear on more than a single switch. The simplest manner in which the

messaging provider can compensate for this situation is to leave the on the VRU associated with the NPA-NXX rather than the subscribers switch and rely on the PSTN to switch the call to the correct destination. This cost represents the inter-switch switched trunking portion of the increase in total trunking that will be required to provide PSTN capacity attributable to voice messaging in a pooling environment.

54 **Miscellaneous Switching Inter Office Trunking Circuit** **2**

U S WEST provides interoffice transport for many voice messaging providers. A feature many offer to their customer base is to be able to send messages directly from the voice response unit (VRU) to another messaging subscriber. Most of these messaging systems require the NPA-NXX for the customer to be located on a single VRU. The VRU is typically connected to 1 or only a few switches which directly serves their subscriber. When a messaging provider operates more than a single VRU in the community and after number pooling is implemented, the addressing scheme will quickly become ambiguous since the NPA-NXX will begin to appear on more than a single switch. The simplest manner in which the messaging provider can compensate for this situation is to leave the on the VRU associated with the NPA-NXX rather than the subscribers switch and rely on the PSTN to switch the call to the correct destination. This cost represents the inter-switch circuit portion of the increase in total trunking that will be required to provide PSTN capacity attributable to voice messaging in a pooling environment.

59 **Miscellaneous VMS Messaging Routers U S WEST VMS** **2**

U S WEST provides its own competitive voice messaging product. The voice response units require the NPA-NXX for the customer to be located on a single VRU. The VRU is typically connected to 1 or only a few switches which directly serves the subscriber. When number pooling is implemented, the addressing scheme will quickly become ambiguous since the NPA-NXX will begin to appear on more than a single switch. While inter-switch trunking can be added to accommodate the increase in traffic expected when pooling is implemented the administration in tracking which customer is located where is expected to become unmanageable. The placement of messaging routers internal to the voice messaging product will re-associate the customer's switch and with the VRU associated with the same switch. The placement of the messaging router will eliminate the growth in inter-switch trunking anticipated with the introduction of number pooling for the market segment served by U S WEST voice messaging.

FCC Docket 95-116; DA 98-2534 Paragraph 50 part (d)
LINKS SCP from STP

Links are added from existing STPs to the newly added MRP ISCP. This is the 2nd ISCP pair serving as a Message Relay Point. This ISCP paired arrangement has links crossing LATA boundaries.

22 **Link Hardware** 2

This capital cost is to equip and build the required DS0 circuit equipment at both the STP and ISCP sites so that the links may be physically built to allow queries only for MRS. The costs identified are entirely attributable to Number Pooling.

23 **Link Hardware expense** 2

This expense cost is to equip and build the required DS0 circuit equipment at both the STP and ISCP sites so that the links may be physically built to allow queries only for MRS. The costs identified are entirely attributable to Number Pooling.

24 **Link Lease when crossing LATA boundaries** 2

This inter-LATA link expense cost is attributable to the placement of the Message Relay Point at the existing regional STP locations, of Denver and Phoenix. This permits the maximum ease in assigning and maintaining the required data base structure and routing structure for the MRP required queries. The STP pair associated with this ISCP pair is also split between Denver and Phoenix. Because of this wide geographic split, half of the links must cross LATA boundaries and must be leased from inter-LATA providers. The costs identified are entirely attributable to Number Pooling.

FCC Docket 95-116; DA 98-2534 Paragraph 50 part (c)
ISCP

The SCP selected for deployment of LNP is the Telcordia ISCP. There were 5 pairs purchased, 4 pairs for use with LRN queries and 1 pair serving as a Message Relay Point (MRP) for Message Relay Service (MRS) queries. The pair serving as the MRP was deployed regionally with the regional STPs split between Denver and Phoenix and will become exhausted due to total query volume with the introduction of number pooling.

25 **ISCP New Hardware MRP** 2

This cost represents the portion of the purchase of the ISCP that is charged to the construction account and is for the 2nd MRP ISCP. The costs identified are entirely attributable to Number Pooling.

26 **ISCP New Software MRP includes annual features** 2

This cost represents the portion of the purchase of the ISCP that is charged to the capital account for software purchases and includes the new MRP ISCP. The costs identified are entirely attributable to Number Pooling.

27 **ISCP Annual Software Maintenance fees MRP** 2

Due to the limited quantity of ISCPs in the U S WEST network U S WEST is relying on outside vendors to assist in maintaining the ISCPs. While U S WEST does maintain its own maintenance work force, tier 3 maintenance and some maintenance supplies are more effectively provided by third parties. The costs identified are entirely attributable to Number Pooling.

48 **ISCP Additional Database Capacity for Pooled Records** 2

The total data capacity of the ISCPs for ported and pooled records is 5,000,000. Today there are over 1,000,000 records of ported numbers. U S WEST is currently assigning 600,000 numbers per month. Additional hardware capacity is required in a Number Pooling environment to expand the database capacity to 15,000,000 records. Without this added capacity and during a Number Pooling Trial; with an undefined set of NPAs pooled; for an undefined set of States; for an undefined period of time; U S WEST risks being unable to complete calls to ported or pooled numbers. The ISCP database contains records for all ported and pooled numbers in the U S WEST region served by the Western Region NPAC for U S WEST and all other local providers, including the State of Alaska. If the records cannot be populated on the ISCP, responses to direct queries sold to others will generate routing failures. The 5 ISCPs previously placed with LNP and the new ISCP placed for Number Pooling will all be equipped with this feature. Refer to 50 below.

49 **ISCP Number Pooling Feature** 2

This feature on the ISCP is required to support Number Pooling's desired intent to represent pooled numbers with Efficient Data Representation (EDR). The intent of EDR is to represent the 1,000 block of pooled numbers as a single entry in the database as opposed to 1,000 individual entries. This capability is made functional when the existing Lockheed Martin NPAC software release 3.0 is implemented. Based upon the vagueness of the FCC order, it is uncertain when EDR will be implemented and ported/pooled record consumption controlled. The 5 ISCPs previously placed with LNP and the new ISCP placed for Number Pooling will all be equipped with this feature.

50 **ISCP Increased Database Feature** 2

This feature on the ISCP is required to support the hardware and addressing associated with an increase in database capacity. The total data capacity of the ISCPs for ported and pooled records is 5,000,000. Today there are over

1,000,000 records of ported numbers. U S WEST is currently assigning 600,000 numbers per month. Additional capacity is required in a Number Pooling environment to expand the database capacity to 15,000,000 records. Without this added capacity and during a Number Pooling Trial; with an undefined set of NPAs pooled; for an undefined set of States; for an undefined period of time; U S WEST risks being unable to complete calls to ported or pooled numbers. The ISCP database contains records for all ported and pooled numbers in the U S WEST region served by the Western Region NPAC for U S WEST and all other local providers, including the State of Alaska. If the records cannot be populated on the ISCP, responses to direct queries sold to others will generate routing failures. The 5 ISCPs previously placed with LNP and the new ISCP placed for Number Pooling will all be equipped with this feature. Refer to 48 above.

51 ISCP Increased Query Capacity Feature **2**

This feature on the ISCP is required to support the increase in queries expected at the Message Relay Point (MRP) that will be induced by the deployment of Number Pooling. This feature is required as a stop gap measure to be able to continue to provide a guaranteed continuation of service until other more comprehensive relief measures can be provided. This feature must be placed because of the timing between the need due to added MRP queries and the point in time when a 2nd MRP ISCP can be placed into service.

60 ISCP Annual Hardware Maintenance Fees **2**

Due to the limited quantity of ISCPs in the U S WEST network U S WEST is relying on outside vendors to assist in maintaining the ISCPs. While U S WEST does maintain its own maintenance work force, tier 3 maintenance and some maintenance supplies are more effectively provided by third parties. The costs identified are entirely attributable to Number Pooling.

Staffing and Personnel Related Costs

With number pooling the personnel related costs are both significant and significant in comparison to the entire project. These are people related costs that will be incurred in direct support of planning, provisioning and maintenance of the number pooling functions and hardware that were added in the network and the administration, inventory management and reporting requirements defined in the National order. See page 19 below for a summary of the additional employees necessary to support number pooling.

28 Network Planning and Project Management term **2**

The planning functions are included to design, coordinate and price the changes and various impacts to the switching and signaling networks as well as the staffing impacts in the network organization.

The project management functions are required to manage the implementation of the number pooling program across all departments including managing the changes in the switching and signaling networks and process and procedure changes required with the implementation of number pooling including auditing, reporting and inventory management changes.

It is expected that the need for this work function will phase out during 2002.

29 **Number Administration specialist** **2**

Permanent staffing is required for the new forecasting, administration, receipt and allocation of numbers at a thousands block level at the Rate Center with no more than a 6 month inventory rather than an NXX at the NPA and switch at about 12 month interval. Permanent staffing is also required for reporting on the utilization of numbering resources on a regular basis to the Pooling Administrator as well as in response to state interrogatories which will happen both more frequently and at a broader scope than is presently done. It is anticipated that automation of the process will allow the headcount to remain stable through the life of this reporting period. There is no initial peak in staffing due to the specialization required to analyze, predict and reserve numbers in a timely manner and also that automated systems to support the work group are expected to be available by mid 2001. Source data for this work is derived from the data content provided by item 34 below.

30 **Complex Translations technical consultant and testers** **2**

This work function is a new full time function whose need is generated by the implementation of Number Pooling. It is expected that Number Pooling will generate a significant quantity of trouble conditions. This trouble generation will be true both through Pooling's introduction and ramp up as well as an ongoing problem attributable to anticipated large volumes of pooled numbers. Most methods and processes will be manual during the introduction of Number Pooling. As the number Pooling deployment nears its ultimate penetration towards the end of 2001 and beginning of 2002 U S WEST will be pooling in large quantities of numbers to a significant network base. Even with automated systems it is unclear what percentage of pooled numbers will encounter trouble conditions. The introduction and ultimate deployment will require extensive trouble analysis including the creation of added testing positions in the complex translations organization. Trouble conditions will be referred for testing and maintenance typically from item 36 below. U S WEST does not have any current experience with Number Pooling, nor the trouble conditions to expect with its implementation and ongoing customer maintenance.

31 **Complex translations Tech SME, Proj mgr, Rtg mgr term** **2**

This work function is created as a temporary process to provide technical consultation to the complex translations staff, to create a Project Manager position

for the implementation of Number Pooling and to create a Position to analyze routing impacts associated with the introduction of Number Pooling. These people are expected to be on staff only until the initial introduction of Number Pooling is complete about the end of 2002.

32 **Complex translations load management and translators** 2

This work function is in addition to the current complex translators required. The added work of building number translations will increase when numbers are pooled into a rate center. The additions are required to keep up with the projected demand and the ability to keep numbers provisioned on the switches in a timely manner to continue to provide service for the customer. The shortened number inventory available to the rate center rather than the switch as is currently done increases total staffing.

33 **Number preparation, analysis and correction term** 2

This work function is incurred entirely to support Number Pooling and the requirement to donate blocks of numbers to a pool. This function analyzes the NPA-NXXs associated with U S WEST's switches to determine which number blocks should be donated to a pool and which if any numbers must be ported back into the switch prior to donation. Without this function it is not possible to determine which blocks should or should not be donated and customers could easily be inadvertently disconnected from service. This separate function is only required during the initial deployment and introduction of Number Pooling. It is expected that this function will terminate about the end of 2001. It is expected at this time to transition the work to the work function described in 34 below.

34 **Number reservation, reporting & auditing** 2

This work function is augmenting existing reporting functions to meet the newly defined requirements of the FCC on an ongoing basis. The order as generated by the FCC requires very basic and fundamental changes in the manner in which numbers are administered and number usage reported. Among the contributors to this increased headcount requirement are the drastic reduction in permitted number inventory from 12 months to 6 months and the restructuring of the inventory base from the NXX at the switch to 1K block at the rate center. Other major contributors are the changes in number usage definitions and reporting interval and content as well as the creation of an audit trail usable by outside auditors. The added staffing is required to fulfill these new requirements established by the FCC.

35 **Interim reporting and analysis term** 2

This work function is new with the Number Pooling order and created just for the period of time required to generate the first in a new set of analysis and reports on U S WEST's usage of numbers for the August 1st 2000 report to the FCC. This is

a term function using the new numbering definitions and reporting structure as defined by the FCC. Without these people being in place the reports required by the FCC in August, 2000 cannot be generated.

36 **Repair, repair screening & repair analysis** **2**

This function handles the repair process from the initial call by a customer through the repair analysis and added function of repairing the problem attributable to Number Pooling. There may be handoffs of trouble conditions for repair to item 30 above. When looking at the introduction of LNP with a trouble rate of 25% or more, orders processed in a pooling environment can be expected to encounter a like percentage of trouble conditions. U S WEST does not have any current experience with Number Pooling, nor the trouble conditions to expect with its implementation and ongoing customer maintenance.

55 **VMS System Administrator** **2**

This work function is required with the implementation of number pooling to track, assign, route and audit the creation and placement of pooled NPA-NXX-Xs internal to the U S WEST voice messaging product. This position is also responsible for methods, processes and auditing of the translations done on the messaging router in item 59 above.

56 **VMS Order Processing** **2**

This work function is required in part with the expected manual implementation of number pooling and ongoing when the messaging routers are placed. The initial orders for voice messaging associated with pooled numbers will have been manually assigned and will require manual processing to correctly associate the customer and switch and VRU. When the messaging router is placed this work function will be modified to include tracking and validation of order processing into the messaging router.

37 **Official communications for added headcount expense** **2**

This cost represents the communications needs for the added headcount, both term employees and permanent employees when required. Where communications facilities are in place this expenditure is not incurred.

38 **Official communications for added headcount capital** **2**

This cost represents the communications needs for the added headcount, both term employees and permanent employees when required. Where communications facilities are in place this expenditure is not incurred.

39 **Furniture, floor space** 2

This cost represents the furniture and floor space needs for the added headcount, both term employees and permanent employees. Where facilities exist there will be no incurred expenditures.

40 **PCs, Terminals Software & Lease for added HC expense** 2

This cost represents the computing needs for the added headcount, both term employees and permanent employees. Due to the large requirement for added headcount and the uncertainty of required timing many of the added employees are term and do not require purchased computing capabilities.

41 **PCs, Terminals for added HC capital** 2

This cost represents the computing needs for the added permanent employees when required. Some computing equipment is already in place.

42 **Rewards and recognition across business units** 2

This cost represents a pool of money set aside for unique recognition for work well done. This will be dispensed, most likely in part, and if it is earned, to some or all of the implementation team.

43 **Incremental process through consultant** 2

Due to the assumed and interpreted time frames for the introduction of Number Pooling and its resultant massive changes in number administration, it is believed that additional assistance from consultants will be required to create those changes. This is an allocation for those consultants if required.

44 **O&T training** 2

Due to the magnitude of changes being introduced by Number Pooling and creating a number pool per rate center most jobs will be impacted. This cost represents the anticipated needs to design, develop, produce, distribute and present training to the Network organization. It is anticipated that the training will be multi-media consisting of videotape, web based instruction and instructor lead presentations as is most benefiting the targeted work group. Not all work groups require the same level of detail, some require very specific and detailed instruction.

45 **Travel & Voucher** 2

It is anticipated that there will be some travel required for the implementation Number Pooling. The specific needs are not clear, but can consist of specialized on site support for installation or testing or meeting with industry representatives

for pooling introduction or regulators concerning the specifics of U S WEST's implementation and status.

46 Maintenance on Capital hardware placed **2**

This cost represents the future maintenance needs for capitalized hardware placed. This cost occurs for each year after the first year the capital is placed, not during the year the capital is placed. This cost represents personnel time for trouble shooting and repair as well as component parts that require replacement and are not included in some type of warranty.

47 Consulting fees **2**

These are fees for anticipated costs for Advanced Technologies and Telcordia for assistance with standards and their interpretation. Also anticipated are joint industry meetings to help ease the introduction of Number Pooling with a common understanding of implementation problems.

The following table summarizes the additional employees necessary to support number pooling for the above line items.

	2000	2001	2002	2003	2004	2005
	Max	Max	Max	Max	Max	Max
Group Id 28	6	6	3	0	0	0
Group Id 29	3	3	3	3	3	3
Group Id 30	9	9	9	9	9	9
Group Id 31	3	3	2	0	0	0
Group Id 32	4	4	4	1	1	1
Group Id 33	75	66	0	0	0	0
Group Id 34	26	25	24	24	24	24
Group Id 35	36	0	0	0	0	0
Group Id 36	27	33	30	30	30	30
Group Id 55	1	3	12	12	12	12
Group Id 56	1	3	12	12	12	12
Total	191	154	98	91	91	91